

# CLAIMS

1. Support device (1) for a rotary drum (2) such as, for example, an oven, drier, cooler or other apparatus, intended, in particular, for heat and/or chemical treatments for materials, including at least one roller (3), capable of co-operating with the said drum (2), and at least two bearings (5, 5'), capable of permitting the rotation of the said roller (3) about its axis of rotation (4), characterised by the fact that it further includes :

- a chassis (7), to which the said bearings (5, 5') are secured, mounted for pivoting about a pivotal axis (11) substantially perpendicular to the plane passing through the axis of rotation (4) of the said roller (3) and perpendicular to the block (6), on which the said device is placed, termed a pivotal plane ;

- connecting means (8), flexible in a given direction (9, 9'), termed the direction of flexibility, and rigid in the directions orthogonal to the said direction of flexibility (9, 9'), to maintain the said bearings (5, 5') on the said block (6) while permitting free pivotal movement of the said chassis (7), in such a way as to permit alignment of the said roller (3) on the drum (2) in the event of the latter pivoting.

2. Device according to claim 1, in which the said connecting means (8) are constituted by at least two elongated pieces (10, 10'), provided substantially symmetrically on either side of the plane passing through the pivotal axis (11) and orthogonal to the said pivotal plane, called the mid-plane, the said pieces (10, 10') being secured, on one hand, to the said chassis (7) and, on the other hand, to the said block (6).

3. Device according to claim 1, in which the said direction of flexibility (9, 9') is designed to have an orientation approximating to the line perpendicular to the block (6).

4. Device according to claim 2, in which the said elongated pieces (10, 10') are constituted by a beam having a flattened cross-section, the length of the said flattened cross-section being orientated in a direction substantially orthogonal to the said direction of flexibility (9,9').

5. Device according to claim 2, in which the said direction of flexibility (9, 9') is designed to have an orientation approximating to the tangent to the circle having as its centre the point of intersection between the pivotal plane and the pivotal axis (11) and passing in the area of the point of attachment of the said elongated pieces (10, 10') to the chassis (7).

6. Device according to claim 1, in which the said pivotal axis (11) designed to be in the area of the plane of symmetry of the bearings (5, 5').

7. Device according to claim, further including a support member (16), in the area of which the said pivotal axis (11) is provided, constituted by two pieces (17, 17') co-operating with one another, the upper one (17') being secured to the said chassis (7) and the other, lower, one (17) to the block (6), the said pieces (17, 17') being formed by sectors of a cylinder with a circular cross-section, the axis of the said cylinder being parallel to the pivotal axis (11).

8. Device according to claim 1, further including adjusting blocks (14, 14') and/or stops (15, 15') capable of restricting any displacements of the said device (1).

9. Device according to claim 1, designed to be inclined by a given angle  $\alpha$  in relation to the horizontal in the direction of the drum (2) in a plane perpendicular to the pivotal plane in such a way that the resultant (18) of the forces exerted by the drum (2) on the said device (1) passes in the vicinity of the intersection of the said pivotal plane and of the pivotal axis (11).

10. Rotary drum (2) equipped with at least one support device (1) according to claim 1.

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